

Appendix A

```

<?xml encoding="UTF-8"?>
5  <!-- $Id: //depot/R2.5/xml/RaptAnalysis.dtd#1 $-->
<!ELEMENT RaptAnalysis (Action, (Input|Output))>
5  <!ELEMENT Action EMPTY>
<!ATTLIST Action
    name (Optimal|Plan |RiskAnalysis
    |GraphSensitivity|TornadoSensitivity|ComponentConsumption|GatedProductsAnalysis
10    |GatingComponentsAnalysis|UnknownAction) #REQUIRED>
<!ELEMENT Input (ProductParameters+, CalculationParameters?,
    ComponentParameters+, Consumption+, ProductInteractions*, SensitivityBaseInfo?,
    (SensitivityGraphInfo?|SensitivityTornadoInfo*),
    (FocalComponentParameters?|FocalProductParameters?))>
15  <!ELEMENT ProductParameters EMPTY>
<!ATTLIST ProductParameters
    product_id CDATA #IMPLIED
    period_id CDATA #IMPLIED
    product_name CDATA #IMPLIED
    cost CDATA #REQUIRED
    asp CDATA #REQUIRED
20    demand_std_dev CDATA #REQUIRED
    ship_plan CDATA #REQUIRED
    demand_mean CDATA #REQUIRED
    target_support_level CDATA #REQUIRED
    target_support_level_conf CDATA #REQUIRED
    demand_high CDATA #IMPLIED
    demand_prob_lower CDATA #IMPLIED>
<!ELEMENT FocalProductParameters EMPTY>
30  <!ATTLIST FocalProductParameters
    product_id CDATA #IMPLIED
    period_id CDATA #IMPLIED
    product_name CDATA #IMPLIED>
<!ELEMENT ComponentParameters EMPTY>
35  <!ATTLIST ComponentParameters
    component_id CDATA #IMPLIED
    period_id CDATA #IMPLIED
    component_name CDATA #IMPLIED
    value_erosion CDATA #IMPLIED
40    supply_plan CDATA #IMPLIED
    cancellation_threshold CDATA #IMPLIED

```

```
cancellation_fee CDATA #IMPLIED
cancellation_minimum CDATA #IMPLIED
lead_time CDATA #IMPLIED
expediting_fee CDATA #IMPLIED
phase CDATA #IMPLIED
cost CDATA #IMPLIED
maximum_contract CDATA #IMPLIED
minimum_contract CDATA #IMPLIED
expedite_threshold CDATA #IMPLIED
expedite_maximum CDATA #IMPLIED
leadtime_constraint CDATA #IMPLIED
leadtime_constraint_flag CDATA #IMPLIED
status CDATA #IMPLIED
plan_level CDATA #IMPLIED>
```

<!ELEMENT FocalComponentParameters EMPTY>

```
<!ATTLIST FocalComponentParameters
  component_id CDATA #IMPLIED
  period_id CDATA #IMPLIED
  component_name CDATA #IMPLIED>
```

<!ELEMENT Consumption EMPTY>

```
<!ATTLIST Consumption
  period_id CDATA #REQUIRED
  product_id CDATA #REQUIRED
  product_name CDATA #IMPLIED
  component_id CDATA #REQUIRED
  component_name CDATA #IMPLIED
  driver_name CDATA #IMPLIED
  mix CDATA #REQUIRED
  quantity CDATA #REQUIRED>
```

<!ELEMENT ProductInteractions EMPTY>

```
<!ATTLIST ProductInteractions
  period_id CDATA #REQUIRED
  product1_id CDATA #REQUIRED
  product1_name CDATA #IMPLIED
  product2_id CDATA #REQUIRED
  product2_name CDATA #IMPLIED
  quant_assessment CDATA #REQUIRED
  qual_assessment CDATA #IMPLIED>
```

<!ELEMENT CalculationParameters EMPTY>

```
<!ATTLIST CalculationParameters
  allocation_policy (Uniform|Prioritized) "Uniform"
  opt_bus_problem CDATA #REQUIRED
  analysis_mode (Commit|Respond) "Commit"
  supply_constraint (On|Off) "Off"
```


Appendix B

```

<!ELEMENT Output (Error(Plan?, ProductResults?, ComponentResults?,
    ComponentGatedProductResults?, ProductGatingComponentResults?,
    SensitivityGraphResults?, SensitivityTornadoResults?, AnalysisMetaResults?))>

5  <!ELEMENT Error (AnalyticError*)>
    <!ELEMENT AnalyticError EMPTY>
    <!ATTLIST AnalyticError
        message CDATA #REQUIRED>
    <!ELEMENT AnalysisMetaResults (AnalysisMetaData+)>
10  <!ELEMENT AnalysisMetaData EMPTY>
    <!ATTLIST AnalysisMetaData
        elapsed_time CDATA #REQUIRED>
    <!ELEMENT Plan (ComponentLevel+)>
    <!ELEMENT ComponentLevel EMPTY>
15  <!ATTLIST ComponentLevel
        component_name CDATA #REQUIRED
        period_id CDATA #IMPLIED
        component_id CDATA #IMPLIED
        status CDATA #IMPLIED
        level CDATA #REQUIRED>
20  <!ELEMENT ProductResults (ProductData+)>
    <!ELEMENT ComponentResults (ComponentData+)>
    <!ELEMENT ProductData EMPTY>
    <!ATTLIST ProductData
25  product_name CDATA #IMPLIED
        product_id CDATA #IMPLIED
        period_id CDATA #IMPLIED
        mean_demand CDATA #IMPLIED
        availability_risk CDATA #IMPLIED
30  avg_fill_rate CDATA #IMPLIED
        avg_shortage_depth CDATA #IMPLIED
        expected_revenue_loss CDATA #IMPLIED
        expected_margin_loss CDATA #IMPLIED
        implied_support_level CDATA #IMPLIED
35  implied_support_level_conf CDATA #IMPLIED
        product_support_percentile CDATA #IMPLIED
        implied_product_support_percent CDATA #IMPLIED
        expected_revenue CDATA #IMPLIED
        expected_margin CDATA #IMPLIED>
40  <!ELEMENT ComponentData EMPTY>

```

<!ATTLIST ComponentData

component_name CDATA #IMPLIED
 component_id CDATA #IMPLIED
 period_id CDATA #IMPLIED
 plan_level CDATA #IMPLIED
 mean_demand CDATA #IMPLIED
 cancellation_cost CDATA #IMPLIED
 expected_erosion_cost CDATA #IMPLIED
 expediting_units CDATA #IMPLIED
 expediting_cost CDATA #IMPLIED
 flex_units CDATA #IMPLIED
 flex_pct CDATA #IMPLIED
 gating_risk CDATA #IMPLIED
 shortage_risk CDATA #IMPLIED
 avg_shortage_depth CDATA #IMPLIED
 avg_excess_depth CDATA #IMPLIED>